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DR. COMSTOCK ON THE PATHOLOGY OF FEVER.—*ESSAY III.*

THE cause of the chill, when there is a chill, and the cause of re-action, when there is re-action, in fevers, have been esteemed two of the most difficult symptoms to account for. Dr. Cullen selected as an archetype to his system, intermittent fever, which always has a chilly fit. But other fevers, even if they thus begin, have not the apyrexia of intermittents—they are not under the control of bark as a specific, nor relapse from an active cathartic, taken in their decline. And besides, this is not liable to be produced by the same cause. But more than all these, there is no other class, nor no other case, of febrile affection, that is subjected to the reiterated and periodical chills of an intermittent. The morbidly diminished action of the heart and arteries is shown by repeated chilly fits, whilst in other fevers it is manifested by other phenomena, varying according to their different types. But the grand query is, whether a chilly fit can be the cause of all the various and multifarious phenomena of yellow fever, spotted fever, and other continued fevers, as Dr. Cullen makes it of intermittent fever? We think the NAYS *would have it*, if this question was submitted to any body of physicians in this or any other country.

By implicitly adhering to those who have stood high in their popularity, we are apt to forget that they were mortals. We neglect to question, to investigate, to doubt, or to make experiments, because we set down our prototype as not liable to error. We dare not announce what great men have denounced, although nature, facts, and principles, abundantly and absolutely contradict them. Art, and influence, and authority, should be laid aside, when nature speaks and decides in opposition. Perfect purity of principle does not insure perfection in practice, or doctrine, or precept.

There are many striking exceptions to the general law of the animal economy, so ably defended by Bichat, that diseased action is restrained from passing to parts contiguous, if their structure is dissimilar. It is a law, however, more striking in its exemplifications than in its exceptions. As when, for example, the peritoneum is inflamed, that portion of it that immediately invests the intestines, the inflammation does not extend to the mucous membranes of the latter. And again, that when the latter are inflamed in dysentery, the diseased action does not reach the former. Still, there are no two parts more dissimilar in structure than the stomach and brain, and yet their sympathies are most striking of all, except those of the stomach and skin. Nausea causes paleness, and vomiting perspira-

tion. Chilliness succeeds eating—puking, tobacco applied to the scalp. Dover's powders and pulv. antimonialis taken into the stomach open the pores even to sweating. Such are a few of the consentaneous accordances between the stomach and skin. A blow on the head causes vomiting; and a foul stomach, headache—showing the sympathy of these parts.

The chilly fit in intermittents is then owing to debility, and nervous irritability, of the stomach, which, like other nervous affections, returns periodically, and manifests its return by a chilly fit. The ague at the commencement of continued fevers, also proceeds from the stomach, but in addition to debility there is irritability, bile, mucus, acidity, or some peculiarly offensive material, in its cavity.* Hence an intermittent sometimes becomes a malignant continued fever, which being broken up by free alvine evacuations, the intermittent has returned, and been cured by bark. A morbid or vitiated state of the liver is to be suspected in most fevers. Yet it is through the medium of the stomach and first passages that its mischief is mostly manifested. Re-action is a symptom abstruse and involved in considerable mystery; it being hard to conceive why too little action should cause that which is too great. Yet no point in the pathology of fever is better established both by observation and by the pages of the most eminent writers. We see this re-action not only in fevers, but are often astonished at its phenomena in nervous diseases. When, for example, a female of rather delicate constitution has from bad news, or some other cause of mental depression, lain for twelve hours in a torpid state, when suddenly such frightful convulsions would ensue that five strong men could scarce keep her in bed. In the spotted fever of Mexico, we are assured, that "A *taciturn* delirium was a sure sign that the patient would run away from his home and bed."

By febrile *re-action* is understood a great increase of the action of the heart and arteries succeeding a chilly fit or state of muscular and arterial debility. As blood is the natural stimulant of the heart and arteries, it is then reasonable to infer that it leaves the extremities and surface in the cold fit, and accumulates about the heart, and in the larger trunks of the arteries, which are then inordinately excited, and that state produced called *re-action*. From the like accumulation in the lungs we are to account for difficult respiration. This in some instances of the *winter epidemic*, as well as anhelation, was a prominent symptom. Dr. Haynsworth, of South Carolina, speaks of the breathing of some of his patients as resembling exactly the "panting of a mastiff after a long chase." He had known the disease terminate in death in *eight* hours. Petechiæ, or some kind of eruption on the skin, with him was common to all its various forms.

A morbid depression, a morbid diminution of the powers of life, whether in the respiratory, sanguiferous, or nervous system, is followed in each by a morbid excitement. Provided, however, which is sometimes but too true, that the depressing agents are not so potent as to prostrate the powers of life below re-action. There is a stage when extreme de-

* It is said by Montanna, that in the spotted fever of Mexico the chills were "unexceptionably attended with puking." Such also is the case in intermittents, when the chill is long continued and intense.

pression is rallying and approaching towards too great action, in which the system has a truce—when the pulse, breathing, and nervous energy, arrive at the meridian of health, on their way from prostration to over-action. It is at this point that the friends of the sick lose their anxiety and often improperly indulge the patient. And even the practitioner is liable to be deceived unless he be wary and experienced.

But after all, is there not another pathology of over-action? It is a law of the animal economy, when any heterogeneous substance offends the human system, that an action is produced to expel the offender. As tears, to wash dust from the eye; suppuration, to expel a thorn from the flesh; vomiting, to throw an emetic from the stomach; and coughing, to raise even a single drop of pure water from the bronchia. All which are unhealthy movements, but calculated by their ultimate effects to restore health. And what is a salivation but a similar process of the salivary glands to rid the system of mercury, which is a foreign and unfriendly substance?—no metal but iron being naturally friendly to the human fluids. Still, that mercury has a remotely pernicious effect upon man, so as to shorten life, as has been maintained, is a most unfounded error. And one case occurs to my recollection directly in point. Lieut. Gov. B. was formerly my patient for a number of years. He was hypochondriacal, and, like all others of his class, had all sorts of imaginary disorders, which he attributed to some other practitioner having many years before given him mercury. Yet the good old gentleman lived to the age of 96!

There cannot remain the least doubt that the cause of febrile commotion has its seat in the stomach. If that cause be contagion, or infection, it is swallowed with the saliva. If it be marsh miasm, putrescent effluvia, vapor of bilge water, confined air, fomites, or exhalations from the soil, and affecting the smell, and received by the lungs, the stomach, before fever ensues, is secondarily affected. If it be putrid, acrid, or superabundant bile, it finds a ready access to the stomach, as no valves entirely obstruct. Hence Drs. Stahl and Boerhaave called the *vena portæ*, the *porta malarum*.

From all these causes, affecting, as they do, the stomach, the use of emetics in the treatment of fevers is to be inferred; and which is most cogently confirmed by the fact that those practitioners have had the best success in common fevers, and even in yellow fever, who have freely resorted to their use. The West-India practice of their omission is theoretical, and has been imitated with disastrous consequences. They prepare the first passages for calomel, opium, capsicum, bark, quinine, diffusible stimulants, febrifuges, food, or whatever may be be indicated. They, and the fact is very remarkable indeed, have never anywhere, or at any time, been generally unpopular; which cannot be said of opium, alcohol, bark, bleeding, or medicines causing salivation in fevers. All these have divided practitioners into parties, and with a considerable majority of the community have ever been unpopular.

In a former essay we adverted to a majority of febrile cases in this country as having no chilly fit. We have since noticed that Prof. Hosack alludes to this unfrequency in yellow fever, as one of the marks of distinction between it and bilious remittents. Dr. Charles Drake, also, in

the yellow fever at N. York in 1819, says, speaking of chills, "sometimes this last symptom was entirely wanting."* In such cases the nerves of the stomach do not respond to the morbid stimulus, but their energy is overwhelmed by the potency of the offending matter. And emetics are more peremptorily called for than when the nervous powers are less paralyzed, and nature helps itself by spontaneous vomiting. Yet when this occurred, it did not prevent Dr. Yates from giving repeated emetics, in the yellow fever, and who cured fifteen out of seventeen of his patients.† We consider calomel and tartarized antimony in the first instance, and calomel and opium in the second, as the most successful mode of combating this Sampson of diseases. Yet, ten to one more pages have been written upon its being contagious or non-contagious, than upon its treatment. And still the matter is left undecided—so many great names standing in total opposition to each other as to neutralize the evidence, and to leave the question open to future investigation—whether it is or is not imported, or of domestic origin, and communicable from the sick to the well? We have sometimes thought that doctrinal points respecting mortal epidemics were more easily and rationally likely to be settled when they did not prevail than when they did, as there is less excitement, more calmness and time to mature the judgment and take an extensive retrospective survey.

As we have mentioned emetics, let the following quotation respecting the matters spontaneously ejected from the stomach in the yellow fever in 1793, at Philadelphia, be for a moment considered. "The matter ejected was variable; sometimes whitish and very acid, setting the teeth on edge; sometimes pure bile, and at others black and glareous, resembling ink-grounds, emitting an hepatic odor, and so acrid as to excoriate the throat, tongue and lips."‡ Of all the terrible sufferings endured by those who suffered that cruel epidemic, there is no one which has ever struck the commiserating cords of our own heart with such force as that described in these few lines. That the mouth, tongue and lips should be denuded by the liquid fire of the stomach, is a horrid thought. Now that emetics, to cast up those morbid materials before they acquired this acrimony; and mercurials, to bring the liver to more healthy action, might have prevented much distress, is to me self-evident. But under the head of *treatment* Dr. Dewees mentions neither.

Dr. Hanie, of Louisiana, in his *Observations on Mercury as a remedy for Fevers of tropical climates*, mentions, among other cases, that of Dr. Smith, from Virginia, who had settled in the village of St. Francisville, La., and was seized with the fever of the climate—with such symptoms as delirium, small pulse, yellowness of the skin, cool extremities, dark-colored tongue," &c. &c. Dr. Smith had previously taken calomel in doses of two or three grains; but getting much worse, Dr. Hanie gave him calomel in doses of a *teaspoonful* "nearly every hour," deeming his former doses entirely inadequate to meet the exigencies of his alarming

* In his letter to the Recorder of Sept 6, 1819.

† See his observations respecting yellow fever in 1822, read before the N. Y. S. Medical Society. Med. Reports of 1823.

‡ See the treatise of Dr. Dewees, who practised in that city at the time, and is thought to have given one of the most minute and lucid accounts of it existing.

situation. Doses of equal or greater magnitude were continued for *three days*. The third day his yellowness began to diminish, and on the fourth day his skin became nearly natural; upon which day he had signs of salivation. On the sixth day ptyalism had commenced, and no more calomel was given. His stools, from having been black, became lighter colored on the fourth day, and soon gained their natural color. After the sixth day nothing remained to be cured but debility and a sore mouth. And as to the latter, we are told, that although the doctor had taken upwards of 1000 grains of calomel in four days! it was not more sore than that of others who had taken only 20 or 30 grains in two or three weeks.* Calomel was considered by Dr. Hanie a diffusible stimulant, and more to be depended on as such than any other medicine whatever. But to assist its stimulant properties its exhibition was accompanied with such adjuvants as oil of amber, oil of cinnamon, brandy and water, and rum, given freely, and "a teacupful of rich soup every hour or two."

It would seem that the French principles of the universality of *sthenic inflammation*, and *contra-stimulus*, have not annihilated every germ of Brown's system from the world quite so speedily as they expected.

We have never had any experience ourselves of pushing calomel, or any other mercurial, to such an extent, or anywhere near it, as Dr. Hanie's practice portrays. We have been compelled to resort to immense quantities of wine, and other exhilarants, supporters and stimulants, to save the lives of patients in the low stages of typhus. But as a general result, we have found more diseases from the excess of stimulus than from its deficiency. And after all, the new French school is not so distant from Brown's doctrines as many suppose, or as they themselves would teach. As respects inflammation, Dr. Brown held that it might partake, or wholly consist, of defect of stimulus, and consequently be an asthenic disease. The French say that every inflammation is of the sthenic diathesis. But then all diseases whatever are included. So that is rather the *kind* of inflammation, than inflammation itself, that divides the parties. We disagree with both, and believe that some diseases are inflammatory, and others void in any degree of that nature.

One of the strongest supports of Dr. Brown's theory of asthenic inflammation, perhaps occurred in the United States. It was in that epidemic so ably described by Dr. Stearns, and others, under the name of pneumonia typhoides. But we know of nothing that has occurred in the medical world to prove the position that every kind of medicine whatever is a *stimulant*; for if so, dulcified spirits of nitre, cream of tartar, nitrate of potash, and even balm tea, ought to be withheld in fevers of high inflammatory diathesis, because such require no stimulants whatever. And even bleeding and the warm bath must be excluded. But nothing of this kind would be admitted any further than in theory, for practically, every kind of stimulant may be used, because inflammation is said to be *asthenic*. We dissent from this and the French doctrines upon practical grounds, and from the practice upon doctrinal grounds. There are diseases purely and decidedly inflammatory, and there are others entirely typhoid, and void of any sthenic or asthenic symptoms of the inflamma-

* See N. Y. Medical Repository for May 1, 1813, Art. I.

tory kind. In the former we have had a patient in pleurisy, who required eight copious bleedings; and in the latter, in a case of low typhus fever, we had a girl in her 13th year, who required, and who took, a whole quart of wine, and a quart of brandy, lacking a gill, both in the same twenty-four hours, and both patients entirely recovered perfect health.

The fascinating doctrine of the unity of fever will certainly fail when tested by unity of treatment. Vinous liquors, in low sinking typhus, are preferable to opium, as they do not constipate. They are preferable to bark, as they do not cause stricture. They support the depressed and discouraged by their stimulus; and if diluted and given warm, they promote perspiration. Carbonate of ammonia, with wine whey, is the most appropriate remedy known—the most excellent, the most unexceptionable, when only a moderate stimulant is required. I have, however, known a case of typhus fever in which there was too much heat for even this. At the same time there was too much debility for any evacuant, and too much irritability of the stomach for the liberal use of febrifuges. In such instances the practice recommended by Hippocrates, of moistening bits of linen in cold water and applying them to the skin, is almost the only indication; and a similar course was adopted by us in the present case with success. Yeast is useful in proportion to the carbonic acid it contains; and is one of those remedial agents to which there is no objection in *hot* typhus, nor in yellow fever.

CORRESPONDENCE BETWEEN M. LOUIS AND DR. BOWDITCH.

To the Editor of the Boston Medical and Surgical Journal.

Sir,—Dr. Bowditch having published in your Journal a correspondence between himself and M. Louis, will you have the goodness to say that I shall re-print it, and connect it with my "Commentaries," with the following prefatory remarks. I should prefer, however, the original to the translation, if Dr. Bowditch will supply an authentic copy.

New York, June 21, 1841. Respectfully yours,
M. Paine.

That the foregoing controversy relative to my Essay on the Principal Writings of M. Louis may not be incomplete, and that every justice may be done to my author, I shall add the following correspondence between Dr. Bowditch and M. Louis, as published in the Boston Medical and Surgical Journal. It will be observed that M. Louis's reply affects in no respect my criticisms, and offers no justification of Dr. Bowditch's false translation of his author, of his interpolation of words which have no remote existence in the original French, or of his alteration of extracts from my "Commentaries" to correspond with his mutilation of the French author.

It was the duty of the Translator and of the Commentator to construe the language of their author according to its only import, and not according to an unknown interpretation which M. Louis might subsequently make in opposition to that import. It was natural enough, especially where a word occurred twice in the same paragraph, to suppose that the

author understood his own "meaning," and that he had *then* employed the proper word, and phraseology, to express it. It was also Dr. Bowditch's belief that he had "translated truly the meaning of the author in every respect."—*(Preface to the Translation.)* But the whole of this was left hypothetically by me, both in my "Commentaries" (Vol. 2, pp. 685, 693); and in my "Reply" to Dr. Bowditch *(Pamphlet*, p. 7—10; *Boston Journal*, Oct., 1840, p. 189—192). Nevertheless, there was every reason to believe, from what I have repeatedly quoted of the language of my author, that he had the actual superintendence of the *typhoid* patients, and I allowed this construction in his behalf as it would have imparted a value to those cases (as stated in my Reply), but of which M. Louis has now divested them. *(See Reply as above.)* Still, however, the cases are virtually adopted by M. Louis as his own, and the whole treatment is fully justified and forms an important part of the basis of his pathological and therapeutical generalizations. *(See Comm.* Vol. 2, p. 685.) If this be not conceded, as constantly set forth by M. Louis, his writings would be utterly worthless. This final disposition of the question, therefore, imparts a new force to all my objections to M. Louis's writings, though I do not profess to have "destroyed" them, as "M. Louis does M. Chomel's work upon Fevers." Nor have I imputed to him, as he perseveringly does (in his answer to a few simple interrogatories) to the whole medical profession, "a total absence of all analysis of facts;" and that, "generally, observations were made with very little exactness," *till the dawn of his own empire.*

Finally, the reader is supplied, by the answer to the interrogatories, with a new justification of my Essay, and of the spirit in which it is written; and, having seen no reason to modify its import, I shall re-print a summary of the proof which I have adduced relative to the disposition which my author had made of the labors of his predecessors.

"What we have hitherto said, may seem harsh towards one so venerated in science, and so encumbered by laurels; whose name is on the lips of the heathen, as it is a household word throughout the Christian land. But, besides the obligations imposed by humanity, and by that very science in which he towers preëminent, to examine with fidelity the system by which a monarch in letters may rule the destinies of his subjects, we have the example of our author himself, of rejecting, with the severest asperity, not only the doctrines, but the labors of the past and present ages. But, we know no difference betwixt the 'authority,' and the 'opinions,' or the 'facts,' of the living and the dead; though he who values worth may be most disposed to raise his shield when the 'mighty dead' call for protection.

"Our author spares no predecessor, personally, or by indirection, from Hippocrates to the dawn of his own empire—few of his cotemporaries—scarcely *posterity*; for such as do not swear allegiance are doomed to the *guillotine*. Like the rich man in Quintilian (Declam. 13) he poisons all the flowers in the garden, that the neighboring bees shall get no more honey from them. 'Every word he speaks is satire; nothing fats him but other mens' ruins'. It is all '*tristia de bonis alienis, et gaudium de adversis.*' All are blotted, as it were, from the records of science. It is said by

Thucydides, that men are more angry at injustice, than when compel'ed by force; and that so much should have been even tolerated by authors who are constantly employed about the experience of the past—*whose labors and whose fame are identified with that experience*; that they should have encouraged the fatal blow which is thus laid at the very foundation of their own performances, is a new trait in human nature. The virgins who watched in the Roman temples were doomed to death, if the flames of their altars were allowed to expire. And shall they who watch at the altars of science permit their desecration, or suffer indignities to their gods to pass unavenged?"—*(Medical and Physiological Commentaries, Vol. 2, p. 801.)*

DIABETES.

FROM A REVIEW OF DR. PROUT'S NEW WORK ON THE STOMACH AND URINARY DISEASES.

ALTHOUGH Dr. Prout is unwilling to pronounce diabetes a malarious disease, he has no hesitation in expressing his belief that almost all forms of disease connected with the development by the secondary assimilating processes of oxalic, lactic, and other abnormal acids, are more frequently excited by malarious than other external influences. His attention was first directed to this point by seeing in quick succession several well-marked cases of oxalic-acid diathesis from a malarious district. The inference drawn from this circumstance was confirmed by the occurrence of the appearances characteristic of oxalic instead of lithic acid in persons affected with indigestion or "cold" after the cholera; a disease which our author believes to have been of malarious origin from certain facts, for which we must refer to the original. Dr. Prout has sometimes imagined that the urine has not completely recovered (1838) its former condition since the occurrence of that epidemic.—A most important order of causes is diet. Under this head, nothing novel, however, is communicated, except a diatribe against the use of tobacco in every form, as if not distinctly inducing the development of oxalic acid, at least that "of some analogous and equally poisonous principle." We confess we cannot consider Dr. Prout's reasoning strong here, though we are equal haters of the weed with himself; as, however, he has *known* "inveterate snuff-taking" lead to "malignant disease of the stomach and liver," there is every excuse, of course, for his warmth, although it be not warranted by mathematical evidence.

The confusion arising from the application of the word diabetes to all affections attended with considerable discharge of urine is justly animadverted on in these pages; their author proposes to restrict it to cases in which the urine is saccharine. The increased flow of urine is the circumstance which commonly directs the patient's attention to the urinary organs; and, as Dr. Prout remarks, "a saccharine condition of the urine exists in gouty and dyspeptic individuals much oftener than is supposed, and hundreds, who are quite unaware of it, pass many years of their lives with this symptom more or less constantly present." We know this to be a fact ascertained by other close observers of the urinary organs also. It

follows from this that the physician must always experience much difficulty in determining the period of origin of diabetic attacks; Dr. Prout, however, conceives that, "by inquiring minutely as to the period when the urine was last observed to be turbid," he has several times traced attacks very nearly to their origin. He believes it probable that, at the time the urine becomes clear, after such turbidity, in patients laboring under diabetes, its saccharine condition may be considered to have set in, or, at least, to have become confirmed.

Dr. Prout remarks, "Diabetes very frequently (as far as my personal experience goes, *always*) accompanies carbuncles and malignant boils or abscesses allied to carbuncles;" a fact mentioned by Cheselden and others of the older writers. These cellular inflammations, however, he is not quite prepared to consider as causes of the affection; and, if he were permitted to draw a general inference from his own observations, he would say "that diabetes usually *follows* cutaneous affections, and accompanies (perhaps *precedes*) the affections of the cellular tissue." The subject is curious, and has, at least in an allied form, engaged the recent attention of a distinguished continental surgeon.

The symptoms of the affection are lucidly described: novelty is, of course, not to be expected. The absence of any important change in the kidneys is affirmed.

Our author enters very fully into the question of treatment, commencing with the important topic of diet. Admitting that an animal diet—as, indeed, follows from his own principles—ought to form an essential principle in the treatment, he considers a certain proportion of farinaceous matter proper. This recommendation is founded upon the positions already stated, that the assimilation of the saccharine principle is one of the last functions that becomes extinct in animals, and the most essential for the continuation of their existence. This may be very true, but what appears to us much more important is the experiment of Mr. McGregor, proving directly, as might be supposed *a priori*, that the quantity of sugar produced in the stomach is much reduced under abstinence from vegetable products. However, we do not mean to contest the secondary importance of Dr. Prout's plan; the craving after farinaceous matter, such as we have ourselves witnessed it, becomes so irresistible in individuals submitted for a length of time to purely animal sustenance, that it seems flying in the face of nature to withhold it altogether. Yet, on the other hand, we may dearly pay for yielding to these importunate solicitations, however natural they may appear: long since, Rollo observed that a few mouthfuls of biscuit re-induced the worst symptoms in a subject whose condition had been materially improved by the animal diet. The hint thrown out by Dr. Willis, of mixing perfectly indigestible vegetable matter with strongly nutritive animal diet, founded on the well-known fact of the unfitness of very concentrated aliment for the sustenance of man, seems to us not to be despised. Every crystallizable variety of the saccharine principle is absolutely inadmissible: Dr. Prout has known "the use of a few saccharine pears undo in a few hours all that he had been laboring for months to accomplish."

It must be considered matter of regret that Dr. Prout has, throughout

his volume, neglected to notice the remarkable announcement of Schwann and Müller, that artificial digestive fluid, though it perfectly dissolves starch, will not convert this principle into sugar unless saliva be added. Those who believe that the gastric error in diabetes consists, either wholly or in part, in abnormally forming sugar, may feasibly make trial of the effect of non-insalivation of the food. The only objection to this seems the difficulty of accomplishing it, for the use of an œsophagus tube is a sad drawback; and, besides, the absence of saliva might, and probably would, entail some new description of disorder. The suggestion, which originated with and displays the practical shrewdness of Dr. Willis, nevertheless, deserves consideration.

Dr. Prout continues, by enforcing the importance of moderation in food. He states that he has found more relief follow the temperate use of, and more support given by, porter, than by any other means whatever; he recommends fluids to be taken tepid. He has no confidence in any medicines recommended as specifics; prescribes venesection under the circumstances in which others have found it beneficial, or leeches to the epigastrium, if there be tenderness there; has seen no permanent benefit derived from the use of purgatives; regards the exhibition of diaphoretics as important, but does not lay the stress upon the use of the vapor bath, which well-ascertained facts warrant; acknowledges the value of opium as a sedative, but deprives it of the shadow of a claim to be regarded as capable of removing the saccharine condition of the urine, and points out that its continued use has the effect, in the end, of making patients confirmed opium-eaters; believes a combination of sedatives with astringents and tonics occasionally useful, and is disposed to think very favorably of phosphate of iron particularly, as the representative of one class of these medicines. In commenting on the treatment of the complications of the affection, and among these of hepatic disorders, the learned author takes occasion to add very materially to the value of his volume, by introducing some admirable strictures upon the abuse of mercury in such treatment. We agree to the fullest point in the spirit of these remarks, and only regret that their length prevents us from finding room for them in full. The following short extract will suffice to direct attention to them: "I can only say that a large proportion of the most inveterate and dyspeptic and urinary diseases which I have seen, have been distinctly referable to the use of mercury." Well may the physician, who has had experience to this effect, stigmatize those who, "to save themselves trouble, and, at the same time, to gain the doubtful reputation of being decisive and quick in their practice, resort to mercury, without due regard to its remote consequences."—*British and Foreign Medical Review.*

THREE CASES OF POISONING WITH ARSENIC.

BY MICHAEL FOSTER.

E. B., the mother of five children, æt. 37, had been in a desponding state of mind, with general debility of the system, for some weeks. On

the 26th of May, 1838, I was hastily summoned to her residence, a distance of eight miles. I arrived about 1 o'clock, P. M., and found that my friend, Mr. Evans, of St. Neot's, had been in attendance for near an hour and a half. This poor woman had administered arsenic to her two children, and then taken it herself. I had no means of ascertaining the quantity; she had mixed it, for herself and eldest child, in the yolk of an egg, and for the infant in pap. From the evidence of the servant girl, it appears the poison must have been taken some time between half past nine and eleven o'clock, A. M. The difference of the effects produced in each patient was remarkable, and requires separate consideration.

Case I.—The mother, when first seen, shortly after eleven o'clock, was sensible, and confessed to having given the children arsenic, and taken it herself; she was vomiting violently, and complained of a burning sensation at the pit of the stomach; there was constant tenesmus, with dejection of mucous stools; pulse, small and rapid; violent delirium soon followed, with tetanic convulsions, requiring the utmost exertions of four persons to hold her in bed; the conjunctiva of the eye became intensely injected; the pupils, from being minutely contracted, became exceedingly dilated; the eyeballs fixed upwards; the mouth drawn in all directions, exhibiting one of the most horrid spectacles imaginable. This state continued for some minutes, calmness and repose followed, in which she expired, about one o'clock, not more than three hours and a half after having taken the poison.

Post-mortem, twenty-four hours after Death.—I regret that circumstances would not allow me an opportunity of examining the head in this or in either of the other cases. The stomach, small intestines, and bladder, on their peritoneal surface, exhibited much inflammatory vascularity. The stomach contained a pint of thin, glairy fluid, of a yellowish color; some white powder (proved to be arsenic) was seen to adhere in some places to the villous coat, which in every part was red and inflamed, but not nearly so much as in the children. The heart was healthy; much dark blood on the right side. The lungs were healthy except their apices, which were studded with tubercles in the first stage, and where there were some hard, dark-colored patches, of an irregular surface, and of the size of a sixpence, similar to the cicatrices of cured tubercles, as mentioned by Carswell, Andral, Louis, &c. All the other parts examined afforded no evidence of disease.

Case II.—Elder child (girl), aged two years and a half, when first seen was in a comatose state. She had been sick and convulsed, and had suffered severe pain; but now there was complete insensibility; the face was swollen, and of a livid hue; the pupils dilated; the breathing difficult; the extremities cold. She was, in fact, in a complete state of narcotism, and died about half past eleven, not more (probably less) than two hours after taking the dose.

Post-mortem.—The stomach contained three or four ounces of fluid, with some particles of white powder; the redness of the villous coat was of a vermilion hue, much more so than in Case I.; much less than in the infant, Case III. The other appearances were similar to those in the mother.

Case III.—The infant, aged five months, I found, about three hours after swallowing the poison, in great agony, with severe bilious vomitings, and convulsions; the extremities cold, the lower ones retracted to the abdomen, which was swollen and tense; the countenance pale, and pulse imperceptible. The usual remedies were administered, but the child gradually sunk, and died about four o'clock, six hours and a half after taking the arsenic.

Post-mortem.—All appearances the same as in the foregoing cases, except that the villous coat of the stomach was in the highest state of inflammation, and in the greater part of its extent the redness was of the brightest scarlet color; in patches there was an effusion of dark blood; no ulceration; no thinning of the coats.

An analysis of the contents of the stomach in each case afforded the usual colors, and deposits with ammoniated sulphate of copper, and ammoniated nitrate of silver; and arsenic in its metallic state was procured from each stomach.

Remarks.—First, the very early period at which death took place is worthy of observation. Dr. Christison (in his work on poisons, p. 276, second edition) quotes a case from Pyl, which proved fatal in three hours, and says, "this is the shortest case of poisoning from arsenic which I have hitherto found in authentic records." In Case II., that of the little girl, death followed, as I have stated, in not more (probably less) than two hours. As this is a fact of some importance, I made minute and careful inquiries. The child died at half past eleven; the husband and servant both stated that they were present with the poor woman during the morning until half past nine (they breakfasted with her, as usual, at nine); and during that time it was scarcely possible for her to have taken the arsenic without their knowledge. At half past nine the husband left to go into his fields; the servant went into the kitchen; the mother almost immediately proceeded up-stairs with the two children, and there remained until they were discovered in the state above mentioned. The supposition that this was the time the arsenic was taken, is further confirmed by the fact that the mother earnestly entreated that an elder child might stay from school that morning, she having intended, as she stated before her death, to give that child some of the arsenic as well as the other children. It will be seen that the mother died in three hours and a half, whilst the infant lived six hours and a half. Did the mixture of the arsenic with the milk retard its action in the latter case?

Second. The very considerable *variety* of *symptoms* and pathological appearances in each case:

Case I. Mother.—Intense excitement of the nervous system, with comparatively slight local inflammation of the stomach.

Case II. Elder child.—Disturbed action of the heart and circulating system, almost amounting to narcotism, with a greater degree of inflammation of the stomach.

Case III. Infant.—Very great and violent local inflammation, with slighter remote symptoms.—*Lancet.*

MASSACHUSETTS GENERAL HOSPITAL.—SURGICAL CASES TREATED BY S. D. TOWNSEND, M.D., SURGEON.

Warty Excrescences of the Lip.—An Irishman, aged 61 years, entered the house May 28. About a year and a half since, first perceived a small white speck on the edge of lower lip, near the right angle, which he disregarded till four months since, when it had increased to the size of a small pea. There was no pain attending it, but the cuticle frequently pealed off, leaving a raw surface. At present the right angle of lower lip is more than twice the natural size, with ragged and unhealthy ulcerations. Tumor occupies about a quarter of the lip. He has latterly visited the Hospital as an out-patient frequently, and has had the carb. and phosphat. of iron, and equal parts of acetate of copper and powdered savin leaf applied to the excrescence, with some benefit.

The operation for the removal of the disease was performed in the following manner: A stright bistoury was passed through the cheek from within outwards, at a point three quarters of an inch from right angle of the mouth and a little below, and brought out at the angle of the mouth; another incision was then commenced at the bottom of the first, brought around and including the tumor upward to the edge of the lip, about an inch from angle of mouth. This irregularity in the incision and deviation from the usual form of the letter V, was rendered necessary by a part of the disease being situated external to the angle of the mouth. There was but little bleeding from the wound, which was brought together by three stitches and compresses, wet in cold water, kept constantly applied to it. The mouth was considerably diminished in circumference and misshapen by this operation, owing to the peculiar situation of the disease. Union seemed to be effected until the fourth day, when the stitches were removed, and a separation took place for about one third of an inch. Some hardness about the wound and appearance of fungus at the edge of the ununited part presented itself, which disappeared on the repeated application of the nitrate of silver. On the 18th day he was discharged well, with a mouth well shaped.

The second case is a seaman, aged 70 years. About four years ago he first perceived a small, black, indurated spot on the edge of the under lip, not tender to the touch. The cuticle frequently pealing off, left a raw, bleeding surface. It was not painful. Latterly it began to increase gradually, and gave him considerable inconvenience. At the period of his admission into the Hospital, the disease covered the upper part of the lower lip, and a hard, irregular tumor extended nearly to the corners of the mouth on each side. A fortnight previous, a fungous growth appeared in the centre, which was treated with alum, since which an ulcer three quarters of an inch long has appeared on the edge of the lip, painful on exposure to the air, and discharging a thin, serous fluid.

The operation was performed by Dr. Hayward* in the following manner: An incision in the form of the letter V was made by two strokes of the scalpel, obliquely from the edge of the lip to the chin, removing a

* By a mutual agreement, such a distribution is made, that the surgeon in attendance gives an opportunity to each of his colleagues to operate occasionally throughout the year.

triangular piece upon which the tumor was situated, of about half the length of the lip. The edges of the wound were then brought together by three stitches, and compresses wet with cold water directed to be applied constantly to the wound. On the fifth day from the operation the stitches were removed, and the wound was perfectly united.

An inquiry has generally been made of patients with this disease of the lip, as well as in cancerous affections of the tongue, whether they were in the habit of using tobacco. In both these cases they were accustomed to smoke a short pipe, and in most of those which I have seen the disease has occurred in elderly people who gave a preference to the pipe over the cigar; it suggested itself to my mind whether the heat from the earthen material may not have greatly aided in producing the disease. The term cancer seems to be incorrectly used when applied indiscriminately to this affection, as it differs from that disease in many points, not always affecting the absorbent glands at a distance, and besides it admits of a cure in many instances and under different modes of treatment.

BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON, JULY 7, 1841.

STATISTICAL REPORT OF THE SICKNESS AND MORTALITY IN THE ARMY OF THE UNITED STATES.

Through the polite attentions of Thomas Lawson, M.D., Surgeon-general of the Army, we have been put in possession of a volume of 343 pages, octavo, compiled from the records of the Surgeon-general's and Adjutant-general's offices, embracing a period of 20 years, from January, 1819, to January, 1839; prepared under the immediate direction of the present indefatigable Surgeon-general. It is designed, ostensibly, for the use of the medical officers of the army.

It is altogether a promising feature in the medical literature of this new country, to have such a mass of statistical matter, especially interesting to the physician, the philosopher and the philanthropist, emanate from such a source. A general opinion is prevalent that to be an army-surgeon, consists simply in being comfortably provided for by the government, and that the very operation of thinking upon subjects relating to life, death or disease, is the last in the series of his contemplations. But there was never a greater misconception of things: this book shows that there are no idlers in the medical corps of the army.

Vital statistics are studied with zeal in the old countries of Europe; and to have the army-surgeons of the United States coöperate with those of their European brethren, who are always ready to take the lead in any measure that is calculated to promote the cause of science, is quite an encouraging event.

There is such an amount of matter brought together in this work, that it is really impossible to do justice to it by simply turning over the leaves. It is the best system of medical topography that has been published in America—being the most accurate and essentially scientific in character,

The book is divided into two parts—embracing each a period of ten years. To give some idea of the labor of arranging the materials, the fact is mentioned in the preface that it was necessary to examine 4000 quarterly sick reports, and to obtain from the Adjutant-general's office the mean strength (of the army) for corresponding periods, compiled from the past and regimental returns. Not to be fatiguing, we leave the subject—with a view of returning to it again whenever we have obtained a clear understanding of its various claims.

Reviewers reviewed.—An ably-written pamphlet of 96 octavo pages, entitled "*An Examination of Reviews contained in the British and Foreign Medical Review, and the Medico-Chirurgical Review, of the Medical and Physiological Commentaries, by the author, M. Paine. M.D., Professor of the Institutes of Medicine and Materia Medica in the University of New York,*" was seasonably received.

Without intending to disturb the equanimity of a multitude who are contented with what they suppose they know, Dr. Paine has raised a tremendous uproar amongst the host medical, both at home and abroad, which is not likely to subside very soon, from the present indications of the press. The fact is, there is no better evidence of the superior intellectual calibre of a man, than the fact that by a single act of literary and scientific labor, he can put all the elements of humanity into a state of activity. He must be a great general whom it requires a holy alliance of nations to conquer.

We have never discovered a reason for changing our original impressions in regard to Dr. Paine's elaborate medical writings, since they were given to the public, notwithstanding the number and violence of the attacks he has received. He is both learned and indomitably laborious; and being in the meridian of life, and placed, too, under the most favorable circumstances that could be desired by an ambitious professor of medicine, made conscious of his power by a whirlwind of dust put in motion by minds ready to contend for every inch of mental territory that lies within the ken of either party, we are persuaded that this gentleman is destined to fill an important place in the field of medical literature before his race is finished.

Toothache.—It is well worthy of being more generally known that the following formula will always remove the toothache in a few minutes, say ten or fifteen, if the bowels are not unhealthily confined. The dose of the opiate should be proportioned, as well as may be, to the violence of the pain; for it will produce no constitutional effect whatever, while it has a violent toothache to grapple with:—R. Carbonate of ammonia, gr. x.; sedative solution of opium, M. xv.; ipecacuan wine, M. xv.; colchicum wine, M. x.; camphor mixture, 3x. M.—*Lancet.*

To Correspondents.—The communications of Drs. Cadwell, Magoun and Holman, are on file for publication.

Married,—In Philadelphia, on Thursday last, John Bell, M.D., to Phebe Wain, daughter of Wm. P. Israel.

Number of deaths in Boston for the week ending July 2, 16.—Males, 8; Females, 8.
Of consumption, 3—infantile, 3—hooping cough, 1—dropsy in the head, 1—measles, 2—liver complaint, 1—marasmus, 1—teething, 1—accidental, 1—scarlet fever, 1—dis, 1.

MASSACHUSETTS MEDICAL SOCIETY.

CENSORS' MEETING.—There will be a stated meeting of the Censors for the First District and Society at large, at the house of Dr. John Jeffries, No. 9 Franklin street, Boston, on Wednesday, the 28th of July, 1841, at 4 o'clock, P.M. Je 30—eptm JOHN JEFFRIES, *Secretary.*

COLUMBIAN COLLEGE, DISTRICT OF COLUMBIA.

THE Lectures in the Medical Department of this Institution will commence on the first Monday in November, annually, and continue until the 1st of March.

During this period, full courses will be delivered on the various branches of medicine by

THOMAS SEWALL, M.D., Professor of Pathology, and the Practice of Medicine.
HARVEY LINDSLY, M.D., Professor of Obstetrics, and the Diseases of Women and Children.
THOMAS MILLER, M.D., Professor of Anatomy and Physiology.
JOHN M. THOMAS, M.D., Professor of Materia Medica and Therapeutics.
J. FREDERICK MAY, M.D., Professor of Surgery; late Professor of Surgery in the University of Maryland.
FREDERICK HALL, M.D., Professor of Chemistry and Pharmacy.
SAMUEL C. SHOOT, M.D., Demonstrator of Anatomy.

As there are many young men of talent and worth in different parts of our country who, from restricted circumstances, are unable to avail themselves of the benefit of public lectures, the Professors have resolved to admit, gratuitously, two such students from each of the States, and one from each of the Territories. In order, however, to guard against individuals whose education and character do not qualify them to become useful members of the profession, the selection is placed in the hands of the Senators and Delegates of Congress, each of whom has the right to select one student from his respective State or Territory, and whose certificate of selection will be a passport to all the lectures, by paying only, on entering the school, the usual matriculating fee of five dollars.

The entire expense, for a Course of Lectures by all the Professors, is $70. Dissecting Ticket, $10; optional with the student.

Good board can be procured at from three to four dollars per week. THOMAS MILLER, M.D.,
Washington, May 1, 1841. My 13—1amtN *Dean of the Faculty.*

ABDOMINAL SUPPORTERS.

DR. HAYNES'S Instrument, which is recommended by the profession generally, may now be had at the Medical Journal office. Price, with perineal strap, only $4—without, $3,50. By addressing the publisher, No. 184 Washington street, physicians may be readily accommodated. A. 19

The Supporters may also be obtained of the following agents:—In New Hampshire, Drs. J. A. Dana, N. Hampton; A. Harris, Colebrook; M. Parker, Acworth; J. Crosby, Meredith; E. Bartlett, Haverhill; D. Crosby, Hanover; F. P. Fitch, Amherst; J. Smith, Dover; J. C. Eastman, Hampstead; C. B. Hamilton, Lyme; Stickney & Dexter, Lancaster; J. B. Abbott, Boscawen; N. Kendall & Co., Nashua. In Vermont, Dr. L. Jewett, St. Johnsbury. L. S. Bartlett, Lowell, Mass. J. Balch, Jr., Providence, R. I.

NEW HAMPSHIRE MEDICAL INSTITUTION.

THE annual course of Lectures in this Institution will commence on Thursday, the 5th of August next, and continue three months.

DIXI CROSBY, M.D., Professor of Surgery, Obstetrics, and Diseases of Women and Children.
EDWARD E. PHELPS, M.D., Lecturer on Materia Medica, Medical Jurisprudence, and Medical Botany.
OLIVER P. HUBBARD, M.D., Professor of Chemistry and Pharmacy.
JOSEPH ROBY, M.D., Professor of the Theory and Practice of Medicine and Pathological Anatomy.
EDMUND R. PEASLEE, M.D., Lecturer on Anatomy and Physiology.

Expenses for the course of lectures, $50,00. Graduating, $18. Matriculating, $3,00. Board may be had at $1,33 to $2,00 per week, and abundant facilities for those who may wish to board themselves. The fees must be paid at the commencement of the term, or notes given with satisfactory security. All operations before the medical class are performed gratis. By order of the Faculty,
Dartmouth College, Hanover, June 15, 1841. Je 23—tA7 OLIVER P. HUBBARD, *Sec'y.*

BERKSHIRE MEDICAL INSTITUTION.

THE annual course of Lectures will commence the first Thursday, 5th of August, 1841, and continue thirteen weeks. Fee for the whole course of lectures, $50; fee for those who have attended two courses at any respectable medical school, $10; graduation fee, $18; library fee according to the number of books taken. Board, from $1,50 to $2,00.

Theory and Practice of Medicine and Obstetrics, by	H. H. CHILDS, D.D.
Principles and Practice of Surgery, by	FRANK H. HAMILTON, M.D.
Anatomy and Physiology, by	JAMES MCCLINTOCK, M.D.
General and Special Pathology, by	ALONZO CLARK, M.D.
Materia Medica and Pharmacy, by	M. A. LEE, M.D.
Chemistry, Botany, and Natural Philosophy, by	CHESTER DEWEY, M.D.
Demonstrator of Anatomy,	C. C. CHAFFEE, M.D.

Pittsfield, Mass., May, 1841. Je 9—tL PARKER HALL, *Secretary.*

VACCINE VIRUS.

PHYSICIANS in any section of the United States can procure ten quills charged with PURE VACCINE VIRUS, by return mail, on addressing the Editor of the Boston Medical and Surgical Journal, enclosing one dollar, *post paid*, without which no letter will be taken from the post office. June 19

THE BOSTON MEDICAL AND SURGICAL JOURNAL is published every Wednesday, by D. CLAPP, JR., at 184 Washington St., corner of Franklin St., to whom all communications must be addressed, post paid. It is also published in Monthly Parts, with a printed cover. There are two volumes each year. J. V. C. SMITH, M.D., Editor. Price $3,00 a year in advance, $3,50 after three months, or $4,00 if not paid within the year. Two copies to the same address, for $5,00 a year, in advance. Orders from a distance must be accompanied by payment in advance or satisfactory references. Postage the same as for a newspaper.